

WHAT IS CLAIMED IS:

1. A system for indexing electronic information, comprising:
an authoring module that coordinates an authoring procedure for
5 creating an index file that includes pattern word sets
corresponding to data objects stored in a memory device, said
pattern word sets being generated with a speech recognition
engine that transforms spoken data descriptions into text data
descriptions, said pattern word sets being associated with data
10 object identifiers that identify said data objects; and
a retrieval module that manages a retrieval procedure in which said
speech recognition engine converts a spoken data request into a
text data request, said retrieval module comparing said text data
request and said pattern word sets to identify a requested object
15 identifier for locating a requested data object from among said
data objects stored in said memory device.
2. The system of claim 1 wherein said pattern word sets each include one
or more search terms derived from said text data descriptions, said search
20 terms including one or more key words that relate to said data objects.
3. The system of claim 1 wherein an indexing graphical user interface is
utilized to create said pattern word sets, said indexing graphical user
interface including an object section for displaying representations of said
25 data objects, said indexing graphical user interface also including an editing
section for converting said text data descriptions into said pattern word sets.
4. The system of claim 1 wherein said data objects include stored images
created by an imaging device, said stored images being saved in said memory
30 device of a host electronic device.

5. The system of claim 4 wherein said authoring module instructs said host electronic device to enter an authoring mode for performing said authoring procedure in response to a verbal authoring-mode command that is recognized by said speech recognition engine.

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6. The system of claim 4 wherein said authoring module displays thumbnail representations of said stored images on a display of said host electronic device to facilitate said authoring procedure.

10 7. The system of claim 4 wherein a selected image is chosen from thumbnail representations of said stored images for creating a corresponding one of said pattern word sets, said selected image being chosen by a system user after viewing said thumbnail representations on an indexing graphical user interface.

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8. The system of claim 4 wherein said spoken data description is provided by a system user speaking into a sound sensor of said host electronic device, said spoken data description including a verbal description of a selected image from said stored images.

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9. The system of claim 1 wherein said speech recognition engine performs speech recognition procedures upon said spoken data descriptions to produce said text data descriptions, said speech recognition engine being implemented as a large-vocabulary continuous speech recognizer that
25 includes acoustic models, a dictionary, and a language model.

10. The system of claim 1 wherein said authoring module displays said text data descriptions on an editing section of an indexing graphical user interface for editing into said pattern word sets.

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11. The system of claim 1 wherein said authoring module edits said text data descriptions on an indexing graphical user interface according to editing instructions from a system user to produce said pattern word sets, said editing instructions including a change-word instruction, a delete-word
5 instruction, and an add-word instruction.

12. The system of claim 1 wherein said authoring module stores each of said pattern word sets along with a corresponding one of said data object identifiers into said index file for subsequently performing said retrieval
10 procedure.

13. The system of claim 4 wherein said retrieval module instructs said host electronic device to enter a retrieval mode for performing said retrieval procedure in response to a verbal retrieval-mode command that is recognized
15 by said speech recognition engine.

14. The system of claim 4 wherein said spoken data request is provided by a system user speaking into a sound sensor of said host electronic device, said spoken data request including a verbal request related to a selected
20 image from said stored images.

15. The system of claim 1 wherein said speech recognition engine performs speech recognition procedures upon said spoken data request to produce said text data request, said speech recognition engine being implemented as
25 a large-vocabulary continuous speech recognizer that includes acoustic models, a dictionary, and a language model.

16. The system of claim 1 wherein said retrieval module accesses said index file for performing a search procedure that identifies said requested
30 data object by seeking search matches between said text data request and said pattern word sets.

17. The system of claim 16 wherein said retrieval module performs said search procedure by utilizing pre-defined priority indicators or pre-defined relationship indicators.

5 18. The system of claim 17 wherein said pre-defined priority indicators are used to evaluate search terms from said text data request based upon corresponding word lengths.

10 19. The system of claim 17 wherein said pre-defined relationship indicators are utilized to evaluate search terms from said text data request depending one whether said search terms are located at the beginning or the end of said text data request.

15 20. The system of claim 4 wherein said retrieval module displays said requested data object on a display of said host electronic device after said retrieval procedure has been performed.

21. A method for indexing electronic information, comprising:
performing an authoring procedure for creating an index file by
20 utilizing an authoring module, said index file including pattern word sets corresponding to data objects stored in a memory device, said pattern word sets being generated with a speech recognition engine that transforms spoken data descriptions into text data descriptions, said pattern word sets being associated
25 with data object identifiers that identify said data objects; and
utilizing a retrieval module to manage a retrieval procedure in which said speech recognition engine converts a spoken data request into a text data request, said retrieval module comparing said text data request and said pattern word sets to identify a
30 requested object identifier for locating a requested data object from among said data objects stored in said memory device.

22. The method of claim 21 wherein said pattern word sets each include one or more search terms derived from said text data descriptions, said search terms including one or more key words that relate to said data objects.

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23. The method of claim 21 wherein an indexing graphical user interface is utilized to create said pattern word sets, said indexing graphical user interface including an object section for displaying representations of said data objects, said indexing graphical user interface also including an editing section for converting said text data descriptions into said pattern word sets.

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24. The method of claim 21 wherein said data objects include stored images created by an imaging device, said stored images being saved in said memory device of a host electronic device.

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25. The method of claim 24 wherein said authoring module instructs said host electronic device to enter an authoring mode for performing said authoring procedure in response to a verbal authoring-mode command that is recognized by said speech recognition engine.

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26. The method of claim 24 wherein said authoring module displays thumbnail representations of said stored images on a display of said host electronic device to facilitate said authoring procedure.

27. The method of claim 24 wherein a selected image is chosen from thumbnail representations of said stored images for creating a corresponding one of said pattern word sets, said selected image being chosen by a system user after viewing said thumbnail representations on an indexing graphical user interface.

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28. The method of claim 24 wherein said spoken data description is provided by a system user speaking into a sound sensor of said host electronic device, said spoken data description including a verbal description of a selected image from said stored images.

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29. The method of claim 21 wherein said speech recognition engine performs speech recognition procedures upon said spoken data descriptions to produce said text data descriptions, said speech recognition engine being implemented as a large-vocabulary continuous speech recognizer that
10 includes acoustic models, a dictionary, and a language model.

30. The method of claim 21 wherein said authoring module displays said text data descriptions on an editing section of an indexing graphical user interface for editing into said pattern word sets.

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31. The method of claim 21 wherein said authoring module edits said text data descriptions on an indexing graphical user interface according to editing instructions from a system user to produce said pattern word sets, said editing instructions including a change-word instruction, a delete-word
20 instruction, and an add-word instruction.

32. The method of claim 21 wherein said authoring module stores each of said pattern word sets along with a corresponding one of said data object identifiers into said index file for subsequently performing said retrieval
25 procedure.

33. The method of claim 24 wherein said retrieval module instructs said host electronic device to enter a retrieval mode for performing said retrieval procedure in response to a verbal retrieval-mode command that is recognized
30 by said speech recognition engine.

34. The method of claim 24 wherein said spoken data request is provided by a system user speaking into a sound sensor of said host electronic device, said spoken data request including a verbal request related to a selected image from said stored images.

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35. The method of claim 21 wherein said speech recognition engine performs speech recognition procedures upon said spoken data request to produce said text data request, said speech recognition engine being implemented as a large-vocabulary continuous speech recognizer that includes acoustic models, a dictionary, and a language model.

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36. The method of claim 21 wherein said retrieval module accesses said index file for performing a search procedure that identifies said requested data object by seeking search matches between said text data request and said pattern word sets.

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37. The method of claim 36 wherein said retrieval module performs said search procedure by utilizing pre-defined priority indicators or pre-defined relationship indicators.

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38. The method of claim 37 wherein said pre-defined priority indicators are used to evaluate search terms from said text data request based upon corresponding word lengths.

39. The method of claim 37 wherein said pre-defined relationship indicators are utilized to evaluate search terms from said text data request depending on whether said search terms are located at the beginning or the end of said text data request.

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40. The method of claim 24 wherein said retrieval module displays said requested data object on a display of said host electronic device after said retrieval procedure has been performed.

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41. A computer-readable medium comprising program instructions for indexing electronic information by:

performing an authoring procedure for creating an index file by

5 utilizing an authoring module, said index file including pattern word sets corresponding to data objects stored in a memory device, said pattern word sets being generated with a speech recognition engine that transforms spoken data descriptions into text data descriptions for creating said pattern word sets, said
10 pattern word sets being associated with data object identifiers that identify said data objects; and

utilizing a retrieval module to manage a retrieval procedure in which
 said speech recognition engine converts a spoken data request
 into a text data request, said retrieval module comparing said
15 text data request and said pattern word sets to identify a requested object identifier for locating a requested data object
 from among said data objects stored in said memory device.

42. A system for cataloguing electronic information, comprising:

20 means for performing an authoring procedure for creating an index file that includes pattern word sets corresponding to data objects stored in a memory device, said pattern word sets being generated with a speech recognition engine that transforms spoken data descriptions into text data descriptions for creating
25 said pattern word sets, said pattern word sets being associated with data object identifiers that identify said data objects; and
 means for managing a retrieval procedure in which said speech recognition engine converts a spoken data request into a text data request, said means for managing then comparing said text
30 data request and said pattern word sets to identify a requested object identifier for locating a requested data object from among said data objects stored in said memory device.

43. A system for indexing electronic information, comprising:
an authoring module that coordinates an authoring procedure for
creating an index file that includes pattern word sets
5 corresponding to images stored in a memory device, said pattern
word sets being generated with a speech recognition engine that
transforms spoken data descriptions into text data descriptions
that are edited upon an indexing graphical user interface for
creating said pattern word sets, said pattern word sets being
10 associated with image identifiers that identify said images; and
a retrieval module that manages a retrieval procedure in which said
speech recognition engine converts a spoken data request into a
text data request, said retrieval module accessing said index file
for comparing said text data request and said pattern word sets
15 to identify a requested image identifier for locating a requested
image from among said images stored in said memory device.

44. A system for indexing electronic information, comprising:
an authoring module that creates an index file that includes pattern
20 word sets corresponding to data objects;
a speech recognition engine that converts a spoken data request into a
text data request; and
a retrieval module that compares said text data request and said
25 pattern word sets to locate a requested data object.

45. A system for indexing electronic information, comprising:
an authoring module that coordinates an authoring procedure for
creating an index file that includes pattern word sets
5 corresponding to data objects stored in a memory device, said
pattern word sets being generated with a speech recognition
engine that transforms spoken data descriptions into text data
descriptions for creating said pattern word sets, said pattern
word sets being associated with data object identifiers that
10 identify said data objects.
46. A system for indexing electronic information, comprising:
a retrieval module that manages a retrieval procedure in which a
speech recognition engine converts a spoken data request into a
15 text data request, said retrieval module comparing said text data
request and said pattern word sets to identify a requested object
identifier for locating a requested data object from among data
objects stored in a memory device.
- 20 47. An electronic indexing system implemented by:
creating an index file that includes pattern word sets corresponding to
data objects, said pattern word sets being generated with a
speech recognition engine that transforms spoken data
descriptions into text data descriptions for creating said pattern
25 word sets;
utilizing said speech recognition engine to automatically convert a
spoken data request into a text data request; and
comparing said text data request and said pattern word sets with a
retrieval module to identify a requested object identifier for
30 locating a requested data object.